California Energy Commission
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Staff Workshop

Interoperability of Electric Vehicle Supply Equipment (EVSE)

Who is Plug In America?

- 30,000 Supporters – Veteran, early adopter and future PEV consumers
- Over 50% are residents of California
- Helped drive more than $14 billion PEV funding in the American Recovery and Reinvestment Act (2009)
- Educates and influences policy makers
- Supporters drive advocacy campaigns
- Over a decade of consumer and technology research
- National Plug In Day 100+ Cities September 28/29

Active Policy Support

- Extend Federal tax credits for PEV & infrastructure
- Charging infrastructure deployment
- Protect EV state incentives
- Electric Vehicles drivers Open Access – CA SB 454
- Gas & road taxes
- California's ZEV Program & Governor's Action Plan
- PEV Collaborative
- Public Utilities Commission proceedings
- Charging station signage & education

Infrastructure Priorities

Match charging levels with applications & needs:

- Data from OEMs & infrastructure providers

- Home charging (L1 & L2)
- Workplace charging (L1 & L2)
- Charging at specific high-demand sites
- DC Fast Charging stations in metro areas
- DC Fast Charging stations between metro areas
- Level 2 charging everywhere / in fill existing

Infrastructure Objectives

- Open access to public charging
- DCFC enables mobility & multi-unit dwelling drivers
- Workplace charging enables e-commutes & MUD
- Charging infrastructure the junction of modes of transportation to reduce trip miles and enable EV use (e.g. BART, CalTrain, RT, Amtrak, Park & Ride)

- Continual learning process for stakeholders - drivers, municipalities, workplace, commercial site hosts

Consumers POV

- Home charging is easiest & most economical
- Consumers continually evaluate fueling choices based on cost and transportation needs
- Infrastructure options reduce risk of PEV ownership
- Workplace charging enables more electric miles, especially for MUD drivers
- Transaction and energy delivered need to be transparent for value comparison
- Consumers endeavor to maximize electric miles

Home Charging

- Primary location for charging
- High % of BEV drivers and PHEV report using 120V at home
- Many drivers are surprised with number of electric miles driven. Often leads to 2nd plug-in purchase.
- Ongoing education needed to insure best utility rate is selected

Workplace Charging

- Strategies for small and medium business to support employee commutes
- 120 / Level 1 provides 25-35 miles per day
- 240 / Level 2 provides 12-30 miles per hour
- Workplace charging enables more electric miles, especially for MUD drivers
- Caution: Success of L2 programs can lead to oversubscription, countermeasures and/or investments
- Ongoing education and program management to optimize infrastructure utilization needed

Business & Technology Considerations

- Business models will evolve to match needs

- Driver feedback suggests it may be too early to for State to invest in roaming technologies
- Consumer perception is driven by station availability, station density and access to mapping
- EVSE and connector standards follow the vehicles

Plug In America

WE DRIVE ELECTRIC. YOU CAN TOO.

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